

**Amendment to the Specification:**

Please replace the paragraph beginning at page 9, line 16 with following amended paragraph:

The first amplifying part in the conventional common source TIA 100 has an input frequency magnitude  $\omega_{in}$  given as follows:

$$\left[ \left[ \omega_{in} = \frac{1}{R_S [C_{GS} + (1 + g_m R_D) D_{GD}]} \right] \right] \omega_{in} = \frac{1}{R_S [C_{GS} + (1 + g_m R_D) C_{GD}]} \text{ Eq. 1,}$$

wherein  $C_{GS}$  is a capacitance between a gate and a source of the transistor 10;  $C_{GD}$  is a capacitance between the gate and a drain of the transistor 10;  $g_m$  is a transconductance of the transistor 10; and  $R_D$  is a drain resistance of the transistor 10.